

AMENDMENTS TO THE SPECIFICATION

Please amend the title of the application as follows:

PIN ASSEMBLY OF ~~LOWER CRAWLER~~ TRACK ROLLER BOGIE IN
CRAWLER TYPE TRAVELING APPARATUS AND CRAWLER TYPE TRAVELING
APPARATUS WITH THE ASSEMBLY

Please amend paragraph [0012] as follows.

In the meantime, rotation portions of the second ring 15 and the pin 13 and slide contact portions including the spacers 17 between the first to third rings 14 to 16 need to be lubricated with lubricant. However, for the purpose of preventing the lubricant from leaking out and for the purpose of protecting the rotation portions and the slide contact portions from soil particles such as sand and silt, the rotation portions and the slide contact portions are sealed from the outside. FIG. 6 is an enlarged view of peripheral portions of rotation portions and slide contact portions of the second ring 15 and the third ring 16 indicted by the arrow B in FIG. 5. In this case, for sealing purposes, the annular recessed grooves 14a, 15a, and 16a are provided in the central portion of the opposite faces of the respective first to third rings 14 to 16, in which the pair of left and right floating seals 18, 18 are fitted. These floating seals 18, 18 contact with each other under pressure by using the pair of O-rings 19, 19. The floating seals 18, 18 and the O-rings 19, 19 prevent the lubricating oil which is supplied through the lubricant passageway 13c of the pin 13 from flowing to the outside from, for example, rotation portions and slide contact portions, and concurrently prevent soil particles from entering into rotation portions and slide ~~faees~~ contact portions from the outside.

Please amend paragraph [0027] as follows.

Major component members of the pin assembly 112, according to this embodiment are a pin 13, first to third rings 114 to 116, floating seals 18, and O-rings 19. A first ring 114 is press fitted into the peripheral surface of the pin 13, a second ring 115 is rotatably and externally fitted in such a manner as to abut an end face of the first ring 114, and a third ring 116 is press fitted in such a manner as to abut an other end face of the second ring 115. Thus, the second ring ~~114~~ 115 is disposed in the center sandwiched by the first and third rings 114, 116, whereby only the second ring 115 is rotatable about the pin 13. The first ring 114 is not formed of a simple ring body, but is formed of a so-called bottomed ring body, whose outer end face is closed by a closed portion 114c. An inner surface central portion of the closed

portion 114c is made into a recessed face 114c' with an external periphery remained not recessed.

Please amend paragraph [0031] as follows.

Further, as described above, spacers are excluded according to the embodiment, so that, as shown in FIGS. 2 and 3, the respective slide contact faces 114b, 115b; 115c, 116b of the first to third rings 114 to 116 and slide contact faces 18a between the floating seals 18 can be disposed on the same plane in the radial direction of the pin assembly 112. In this case, for seizure prevention, the first to third rings 114 to 116 are formed by using chrome molybdenum steel as material, and surface hardening treatment such as carburized quenching is applied to the respective slide contact faces 114b, 115b; 115c, 116b of the respective rings 114 to 116. Further, the lubricant is supplied onto the respective slide contact faces 114b, 115b; 115c, 116b from the lubricant filling portion ~~20~~ 13a via the lubricant outflow hole ~~49~~ 13b and the lubricant passageway ~~48~~ 13c.

Please amend paragraph [0034] as follows.

With the slide contact faces reduced in number, in comparison between the conventional pin assembly 12 and the pin assembly 112 of the embodiment, it was indicated that the total amount of wear in the slide contact faces between the first to third rings 114 to 116 of the pin assembly 112 of the embodiment is reduced by 1/10 of a conventional amount of wear, which was well beyond expectation. This reduction of the amount of wear is attributed not only to the simple exclusion of the spacers, but also in significant part to the fact that exclusion of the spacers enabled the seal faces 18a of the floating seals 18 and the slide contact faces 114b, 115b; 115c, 116b between the first to third rings 114 to 116 to be disposed on the same plane in the ~~radial~~ radial direction.

Please amend paragraph [0045] as follows.

The second bogie link 10 is attached rotatably with respect to the first bogie link 9 in the second shaft bearing portion 9b of the first bogie link 9 thus rotatably attached to the track frame 1, via a different pin assembly 112 having the same structure as the above-described pin assembly 112. That is, the second bogie link 10 is movably fitted into the angularly columnar cavity portion 9b'' of the first bogie link 9, and alignment is carried out between the pin press-in opening 10a' formed in the central shaft bearing portion 10a and the pin

press-in opening 9b' formed in the second shaft bearing portion 9b. Thereafter, the first and third rings 114, 116 of the pin assembly 112 are press fitted into the pin press-in opening 9b' of the second shaft bearing portions 9b, and the second ring 115 of the pin assembly 112 is press fitted into the pin press-in opening 10a' of the second bogie link 10. After the attachment of the bogie 5 to the track frame 1 in the manner described above, a first cover 20 for covering the outer face of each shaft bearing portion of the first and second brackets 11a, 11b is fastened and fixed with bolts, and at the same time, a second cover 21 for covering the outer face of each second shaft bearing portion 9b of the first bogie link 9 is fastened and fixed with bolts. Further, in a similar manner, the inner face and outer face of a lower end portion of the first bogie link 9 are covered by a third cover 22 and the second cover 21, whereby assembly of the bogie 5 to the track frame 1 is completed. The ~~lower wheels~~ track rollers 6 are rotatably attached to both front and rear end portions of the second bogie link 10.

Please amend paragraph [0046] as follows.

In the manner described above, except for the track rollers closest to the idler ~~tumbler 2~~ tumbler 3 of the track frame 1, the bogie 5 comprised of the high follow-up capability type first and second bogie links 9 and 10 is assembled to the lower portion of the track frame 1. Then, the one end portion of the track frame 1 is swingably attached to the vehicle body (not shown) via the pivot shaft 2; and the idler tumbler 3 and the sprocket wheel 4 are attached to the both front and rear portions of the track frame 1; and the crawler chain 8 is wound around the idler tumbler 3, the track rollers 6, the sprocket wheel 4, and the carrier rollers 7.

Please amend paragraph [0048] as follows.

For instance, even in the event that a crawler chain 8 near a lower portion of the sprocket wheel 4 is largely bent when running over rough and uneven terrain portions during reverse travel, the track rollers 6, 6 quickly follow the crawler chain 8 and do not disengage from the crawler chain 8. Further, since the positions of the idler ~~tumbler 4~~ tumbler 3 and the sprocket wheel 4 do not change with respect to the track frame 1, an actual engagement ground length of the crawler chain 8 also does not change. Thereby, even during travel on an irregular terrain with very rough and uneven terrain portions, since the track rollers 6, 6 follow and contact with the tread of the crawler chain 8, crawler chain can be prevented from disengagement without causing problems of the travel even after having traveled over rough and uneven terrain portions, and the ride comfort is improved. Further, the amount of rough

and uneven terrain to be covered by the crawler chain 8 is increased, and the track rollers ~~11,~~
~~12~~ 6, 6 consistently support the vehicle body. Consequently, impact forces after having
traveled over rough and uneven terrain portions can be reduced, and the durability of a
vehicle and ride comfort can be improved. Further, the actual ground engagement length is
stabilized, so that shoe slip can be prevented, and high traction forces can be obtained.

Please replace the Abstract with the enclosed substitute Abstract which is on a
separate sheet.